## **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	10/568.999
Source:	1FWP
Date Processed by STIC:	3/1/06

## ENTERED



/FWP

RAW SEQUENCE LISTING DATE: 03/01/2006
PATENT APPLICATION: US/10/568,999 TIME: 14:03:33

Input Set : A:\PC25634.txt

```
3 <110> APPLICANT: Hardham, John Morgan
             Dreier, Kimberly Jean
             Krishnan, Rajendra
      5
             McGavin, David Ross
      8 <120> TITLE OF INVENTION: Vaccine for Periodontal Disease
     10 <130> FILE REFERENCE: PC25634
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/568,999
C--> 12 <141> CURRENT FILING DATE: 2006-02-21
     12 <160> NUMBER OF SEQ ID NOS: 17
     14 <170> SOFTWARE: PatentIn version 3.2
     16 <210> SEQ ID NO: 1
     17 <211> LENGTH: 21
     18 <212> TYPE: DNA
     19 <213> ORGANISM: Artificial
     21 <220> FEATURE:
     22 <223> OTHER INFORMATION: Sequencing Primer
     24 <400> SEQUENCE: 1
                                                                               21
     25 ggattagata ccctggtagt c
     28 <210> SEQ ID NO: 2
     29 <211> LENGTH: 19
     30 <212> TYPE: DNA
     31 <213> ORGANISM: Artificial
     33 <220> FEATURE:
     34 <223> OTHER INFORMATION: Sequencing Primer
     36 <400> SEQUENCE: 2
                                                                               19
     37 cccgggaacg tattcaccg
     40 <210> SEO ID NO: 3
     41 <211> LENGTH: 550
     42 <212> TYPE: DNA
     43 <213> ORGANISM: Bacteroides sp.
     45 <400> SEQUENCE: 3
     46 gcacagtaaa cgatgaatac tcgctgtttg cgatacactg taagcggcca agcgaaagcg
                                                                               60
                                                                              120
     48 ttaagtattc cacctgggga gtacgccggc aacggtgaaa ctcaaaggaa ttgacggggg
                                                                              180
     50 cccgcacaag cggaggaaca tgtggtttaa ttcgatgata cgcgaggaac cttacccggg
     52 cttaaattgc gctggctttt accggaaacg gtattttctt cggaccagcg tgaaggtgct
                                                                              240
     54 gcatggttgt cgtcagctcg tgccgtgagg tgtcggctta agtgccataa cgagcgcaac
                                                                              300
     56 ccttatcttt agttactaac agttttgctg aggactctaa agagactgcc gtcgtaagat
                                                                              360
                                                                              420
     58 gcgaggaagg tggggatgac gtcaaatcag cacggccctt acgtccgggg ctacacacgt
     60 gttacaatgg ggagcacagc aggttgctac acggcgacgt gatgccaatc cgtaaaactc
                                                                              480
     62 ctctcagttc ggatcgaagt ctgcaacccg acttcgtgaa gctggattcg ctagtaatcg
                                                                              540
                                                                              550
     64 cgcatcagcc
     67 <210> SEQ ID NO: 4
     68 <211> LENGTH: 560
```

Input Set : A:\PC25634.txt

```
69 <212> TYPE: DNA
70 <213> ORGANISM: Porphyromonas levii
72 <400> SEQUENCE: 4
73 cgctgtaaac gatgattact cagagtatgc gatataatgt atgctctcaa gcgaaagcgt
                                                                          60
75 taagtaatcc acctggggag tacgtcggca acgatgaaac tcaaaggaat tgacgggggc
                                                                         120
77 ccqcacaaqc qqaqqaacat qtqqtttaat tcqatgatac gcgaggaacc ttacctggga
                                                                         180
79 ttgaaatgta tatgccggta tcccgaaagg ggtgctattc acttcggtga cgtatatgta
                                                                         240
81 qqtqctqcat ggttqtcqtc agctcqtqcc gtqaggtqtc ggcttaagtq ccataacgag
                                                                         300
                                                                         360
83 cqcaaccett atcgtcagtt gctagcaggt aaagctgagg actctggcga gactgccgtc
85 gtaaggcgag aggaaggtgg ggatgacgtc aaatcagcac ggcccttata tccagggcga
                                                                         420
87 cacacgtgtt acaatggtga ggacaaaggg tcgctacccg gtgacgggat gccaatctcc
                                                                         480
89 aaacctcatc tcagttcgga tcggagtctg caactcgact ccgtgaagct ggattcgcta
                                                                         540
                                                                         560
91 qtaatcqcqc atcaqccatq
94 <210> SEQ ID NO: 5
95 <211> LENGTH: 520
96 <212> TYPE: DNA
97 <213> ORGANISM: Tannerella forsythensis
99 <400> SEQUENCE: 5
100 bortaggagt tigggatata dagtaagete tadagegaaa gegitaagta atecadetig
                                                                           60
                                                                                7-
102 qqaqracgcc ggcaacggtg aaactcaaag gaattgacgg gggcccgcac aagcggagga
                                                                          120
104 acatgtggtt taattcgatg atacgcgagg aaccttaccc gggattgaaa tgtagacgac
                                                                          180
106 ggacagtgag agetgtette cettegggge gtetatgtag gtgetgeatg gttgtegtea
                                                                          240
108 gctcgtgccg tgaggtgtcg gcttaagtgc cataacgagc gcaaccctga ctgtcagttg
                                                                          300
                                                                          360
110 ctaacaqqtt aaqctqaqqa ctctqqcqqq actqccqgcg taagctgtga ggaaggttgg
112 gatgacgtca aatcagcacg gcccttacat ccggggcgac acacgtgtta caatggcagg
                                                                          420
114 gacaaagggc agctaccggg cgaccggatg ccaatctcca aaccctgtct cagttcggat
                                                                          480
                                                                          520
116 cggagtctgc aactcgactc cgtgaagctg gattcgctag
119 <210> SEQ ID NO: 6
120 <211> LENGTH: 1496
121 <212> TYPE: DNA
122 <213> ORGANISM: Bacteroides sp.
124 <400> SEQUENCE: 6
125 aggettacae atgeaagteg aggggeagea ttatettage ttgetaagat agatggegae
                                                                           60
                                                                          120
127 cggcgcacgg gtgagtaaca cgtatccaac cttccggtta ctcggggata ggctttcgaa
                                                                          180
129 agaaagatta atacccgatg ttgcgtatct ttctcctgaa agatacgcca aaggattccg
131 gtaaccgatg gggatgcgtt ccattaggca gttggcgggg taaccggccca ccaaaccttc
                                                                          240
                                                                          300
133 gatggatagg ggttctgaga ggaaggtccc ccacattgga actgagacac ggtccaaact
                                                                          360
135 cctacgggag gcagcagtga ggaatattgg tcaatggacg gaagtctgaa ccagccaagt
                                                                          420
137 agcqtgaagg atgactgccc tctgggttgt aaacttcttt tatacgggaa taacatgagg
139 tacgcgtacc ttattgcatg taccgttatg aataagcatc ggctaactcc gtgccagcag
                                                                          480
141 ccqcqqtaat acqgaqqatg cgaqcgttat ccggatttat tgggtttaaa gggagcgtag
                                                                          540
                                                                          600
143 qtqqqatatt aaqtcaqctq tgaaagtttg gggctcaacc ttaaaaattgc agttgatact
145 ggtttccttg agtacggtac aggtgggcgg aattcgtggt gtagcggtga aatgcttaga
                                                                          660
147 tatcacgaag aactccgatc gcgaaggcag ctcaccgggc cggaactgac actgatgctc
                                                                          720
                                                                          780
149 gaaagtgcgg gtatcaaaca ggattagata ccctggtagt ccgcacagta aacgatgaat
                                                                          840
151 actogotgtt tgcgatacac tgtaagcggc caagcgaaag cgttaagtat tccacctggg
                                                                           900
153 gagtacgccg gcaacggtga aactcaaagg aattgacggg ggcccgcaca agcggaggaa
155 catgtggttt aattcgatga tacgcgagga accttacccg ggcttaaatt gcgctggctt
                                                                          960
157 ttaccggaaa cggtattttc ttcggaccag cgtgaaggtg ctgcatggtt gtcgtcagct
                                                                          1020
```

Input Set : A:\PC25634.txt

159	cgtgccgtga ggtgtcggct t	aagtgccat	aacgagcgca	acccttatct	ttagttacta	1080
	acagttttgc tgaggactct a					1140
	acgtcaaatc agcacggccc t					1200
	gcaggttgct acacggcgac g					1260
	gtctgcaacc cgacttcgtg a					1320
	gtgaatacgt tcccgggcct t					1380
	tgaagtacgt aaccgcgagg a					1440
	acaaggtagc cgtaccggaa g					1496
	<210> SEQ ID NO: 7	,5 - 5 - 5 5 5	J	33.3	J J	
	<211> LENGTH: 563					
	<212> TYPE: DNA					
	<213> ORGANISM: Bactero	oides sp.				
	<400> SEQUENCE: 7					
	cagtaaacga tgaatactcg c	tatttacaa	tacactgtaa	gcggccaagc	gaaagcgtta	60
	agtattccac ctggggagta c					120
	gcacaagcgg aggaacatgt g					180
	aaattgcgct ggcttttacc g					240
	tggttgtcgt cagctcgtgc c		•			300
	tatetttagt taetaacagt .					350
	aggaaggtgg ggatgacgtc a					420
	acaatggga gcacagcagg t					480
	tcagttcgga tcgaagtctg c					540
	atcagccacg gcgcggtgaa t		0030344300	5500005000	5000005050	563
	<210> SEQ ID NO: 8					
	<211> LENGTH: 563					
	<212> TYPE: DNA					
	<213> ORGANISM: Bactero	oides sp.				
	<400> SEQUENCE: 8	Jacob Dp.				
	cagtaaacga tgaatactcg c	ctatttacaa	tacactqtaa	gcggccaagc	gaaagcgtta	60
	agtattccac ctggggagta c					120
	gcacaagcgg aggaacatgt g					180
	aaattgcgct ggcttttacc g					240
	tggttgtcgt cagctcgtgc c					300
	tatctttagt tactaacagt t					360
	aggaaggtgg ggatgacgtc a		•			420
	acaatggga gcacagcagg t					480
	tcagttcgga tcgaagtctg c					540
	atcagccacg gcgcggtgaa t			55	5 5 - 5	563
	<210> SEQ ID NO: 9					
	<211> LENGTH: 565					
	<212> TYPE: DNA					
	<213> ORGANISM: Bactero	oides sp.				
	<400> SEQUENCE: 9					
	gcacagtaaa cgatgaatac t	cactattta	cgatacactg	taagcggcca	agcgaaagcg	60
	ttaagtattc cacctgggga g					120
	cccgcacaag cggaggaaca t					180
	cttaaattgc gctggctttt a					240
	gcatggttgt cgtcagctcg t					300
	ccttatcttt agttactaac a					360
_ 10	colocide agreeded a			3 3 6 5 6	72	

Input Set : A:\PC25634.txt

```
248 gcgaggaagg tggggatgac gtcaaatcag cacggccctt acgtccgggg ctacacacgt
                                                                               420
                                                                               480
    250 qttacaatqq qqaqcacaqc aqqttqctac acggcgacgt gatgccaatc cgtaaaactc
                                                                               540
    252 ctctcagttc ggatcgaagt ctgcaacccg acttcgtgaa gctggattcg ctagtaatcg
                                                                               565
    254 cqcatcaacc acggcgcggt gaata
    257 <210> SEQ ID NO: 10
    258 <211> LENGTH: 564
    259 <212> TYPE: DNA
    260 <213> ORGANISM: Bacteroides sp.
    262 <400> SEQUENCE: 10
    263 acagtaaacg atgaaatact cgctgtttgc gatacactgt aagcggccaa gcgaaagcgt
                                                                                60
    265 taagtattcc acctggggag tacgccggca acggtgaaac tcaaaggaat tgacgggggc
                                                                               120
                                                                               180
    267 ccgcacaagc ggaggaacat gtggtttaat tcgatgatac gcgaggaacc ttacccgggc
    269 ttaaattgcg ctggctttta ccggaaacgg tattttcttc ggaccagcgt gaaggtgctg
                                                                               240
                                                                               300
    271 catggttgtc gtcagctcgt gccgtgaggt gtcggcttaa gtgccataac gagcgcaacc
                                                                               360
    273 cttatcttta gttactaaca gttttgctga ggactctaaa gagactgccg tcgtaagatg
                                                                               420
    275 cgaggaaggt ggggatgacg tcaaatcagc acggccctta cgtccggggc tacacacgtg
                                                                               480
    277 ttacaatggg gagcacagca ggttgctaca cggcgacgtg atgccaatcc gtaaaactcc
                                                                               540
    279 tctcagttcg gatcgaagtc tgcaacccga cttcgtgaag ctggattcgc tagtaatcgc
 - ag: 281 geaticaacca eggegeggtg aato
                                                  1,42
   284 <210> SEQ ID NO: 11
    285 <211> LENGTH: 566
    286 <212> TYPE: DNA
    287 <213> ORGANISM: Bacteroides sp.
     290 <220> FEATURE:
    291 <221> NAME/KEY: misc feature
    292 <222> LOCATION: (547)..(547)
    293 <223> OTHER INFORMATION: n is a, c, g, or t
     295 <220> FEATURE:
    296 <221> NAME/KEY: misc feature
    297 <222> LOCATION: (555)..(555)
    298 <223> OTHER INFORMATION: n is a, c, g, or t
    300 <400> SEQUENCE: 11
    301 cgcacagtaa acgatgaata ctcgctgttt gcgatacact gtaagcggcc aagcgaaagc
                                                                                60
                                                                               120
    303 gttaagtatt ccacctgggg agtacgccgg caacggtgaa actcaaagga attgacgggg
                                                                               180
     305 gecegeacaa geggaggaac atgtggttta attegatgat aegegaggaa cettaceegg
                                                                               240
    307 gcttaaattg cgctggcttt taccggaaac ggtattttct tcggaccagc gtgaaggtgc
                                                                               300
     309 tgcatggttg tcgtcagctc gtgccgtgag gtgtcggctt aagtgccata acgagcgcaa
                                                                               360
     311 cccttatctt tagttactaa cagttttgct gaggactcta aagagactgc cgtcgtaaga
     313 tgcgaggaag gtggggatga cgtcaaatca gcacggccct tacgtccggg gctacacacg
                                                                               420
                                                                               480
    315 tgttacaatg gggagcacag caggttgcta cacggcgacg tgatgccaat ccgtaaaact
                                                                               540
     317 cctctcagtt cggatcgaag tctgcaaccc gacttcgtga agctggattc gctagtaatc
                                                                               566
W--> 319 gcgcatnacc acggngcggt gaatac
     322 <210> SEQ ID NO: 12
     323 <211> LENGTH: 565
     324 <212> TYPE: DNA
    325 <213> ORGANISM: Bacteroides sp.
    327 <400> SEQUENCE: 12
    328 gcacagtaaa cgatgaatac tcgctgtttg cgatacactg taagcggcca agcgaaagcg
                                                                                60
     330 ttaagtattc cacctgggga gtacgccggc aacggtgaaa ctcaaaggaa ttgacggggg
                                                                               120
```

Input Set : A:\PC25634.txt

332	cccgcacaag cggaggaaca	tgtggtttaa	ttcgatgata	cgcgaggaac	cttacccggg	180
	cttaaattgc gctggctttt					240
	gcatggttgt cgtcagctcg					300
	ccttatcttt agttactaac					360
	gcgaggaagg tggggatgac					420
	gttacaatgg ggagcacagc					480
	ctctcagttc ggatcgaagt					540
	cgcatcagcc acggcgcggt					565
	<210> SEQ ID NO: 13					
350	<211> LENGTH: 565					
351	<212> TYPE: DNA	•				
352	<213> ORGANISM: Bacter	roides sp.				
354	<400> SEQUENCE: 13					
355	cacagtaaac gatgaatact	cgctgtttgc	gatacacggt	aagcggccaa	gcgaaagcgt	60
357	taagtattcc acctggggag	tacgccggca	acggtgaaac	tcaaaggaat	tgacgggggc	120
359	ccgcacaagc ggaggaacat	gtggtttaat	tcgatgatac	gcgaggaacc	ttacccgggc	180
	ttaaattgcg ctggctttta					240
	catggttgtc gtcagctcgt					300
	cttatcttta ghtauhanca					4 3€0
367	cgaggaaggt ggggatgacg	rcaaatcagc	acggccctta	cgtccggggc	tacacacgtg	420
	ttacaatggg gagcacagca					480
371	tctcagttcg gatcgaagtc	tgcaacccga	cttcgtgaag	ctggattcgc	tagtaatcgc	540
373	gcatcagcca cggcgcggtg	aatac	*			565
376	<210> SEQ ID NO: 14					
377	<211> LENGTH: 564					
	<212> TYPE: DNA					
379	<213> ORGANISM: Bacter	roides sp.				•
381	<400> SEQUENCE: 14					
	acagtaaacg atgaatactc					60
	aagtattcca cctggggagt					120
	cgcacaagcg gaggaacatg					180
	taaattgcgc tggcttttac					240
	atggttgtcg tcagctcgtg					300
	ttatctttag ttactaacag					360
	gaggaaggtg gggatgacgt					420
	tacaatgggg agcacagcag					480
	ctcagttcgg atcgaagtct		ttcgtgaagc	tggattcgct	agtaatcgcg	540
	catcagccac ggcgcggtga	atac				564
	<210> SEQ ID NO: 15					
	<211> LENGTH: 565					
	<212> TYPE: DNA					
	<213> ORGANISM: Bacte:	roides sp.				
	<400> SEQUENCE: 15					
	cacagtaaac gatgaatact					60
	taagtattcc acctggggag					120
	ccgcacaagc ggaggaacat					180
	ttaaattgcg ctggctttta					240
	catggttgtc gtcagctcgt					300
419	cttatcttta gttactaaca	gttttgctga	ggactctaaa	gagactgccg	ccgcaagatg	360

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/01/2006 PATENT APPLICATION: US/10/568,999

TIME: 14:03:34

Input Set : A:\PC25634.txt

Output Set: N:\CRF4\03012006\J568999.raw

## Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seg#:11; N Pos. 547,555

## Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seg#:1,2,16,17

VERIFICATION SUMMARY

DATE: 03/01/2006

PATENT APPLICATION: US/10/568,999

TIME: 14:03:34

Input Set : A:\PC25634.txt

Output Set: N:\CRF4\03012006\J568999.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:540